

Fig. 1a

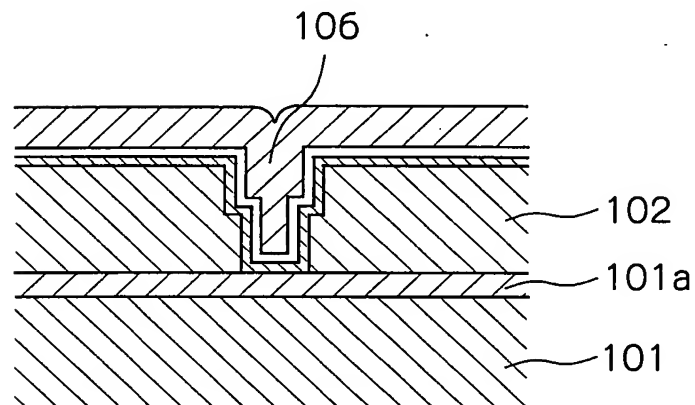


Fig. 1b

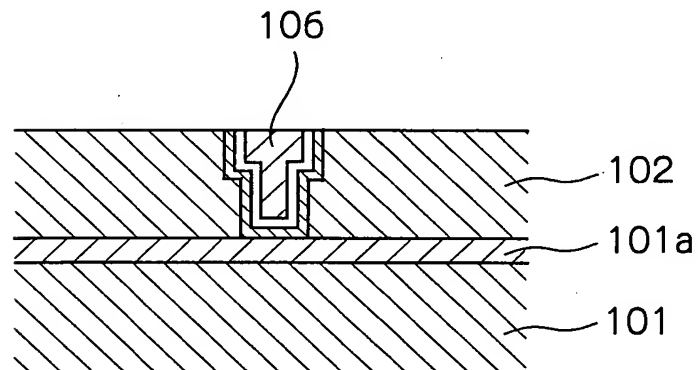
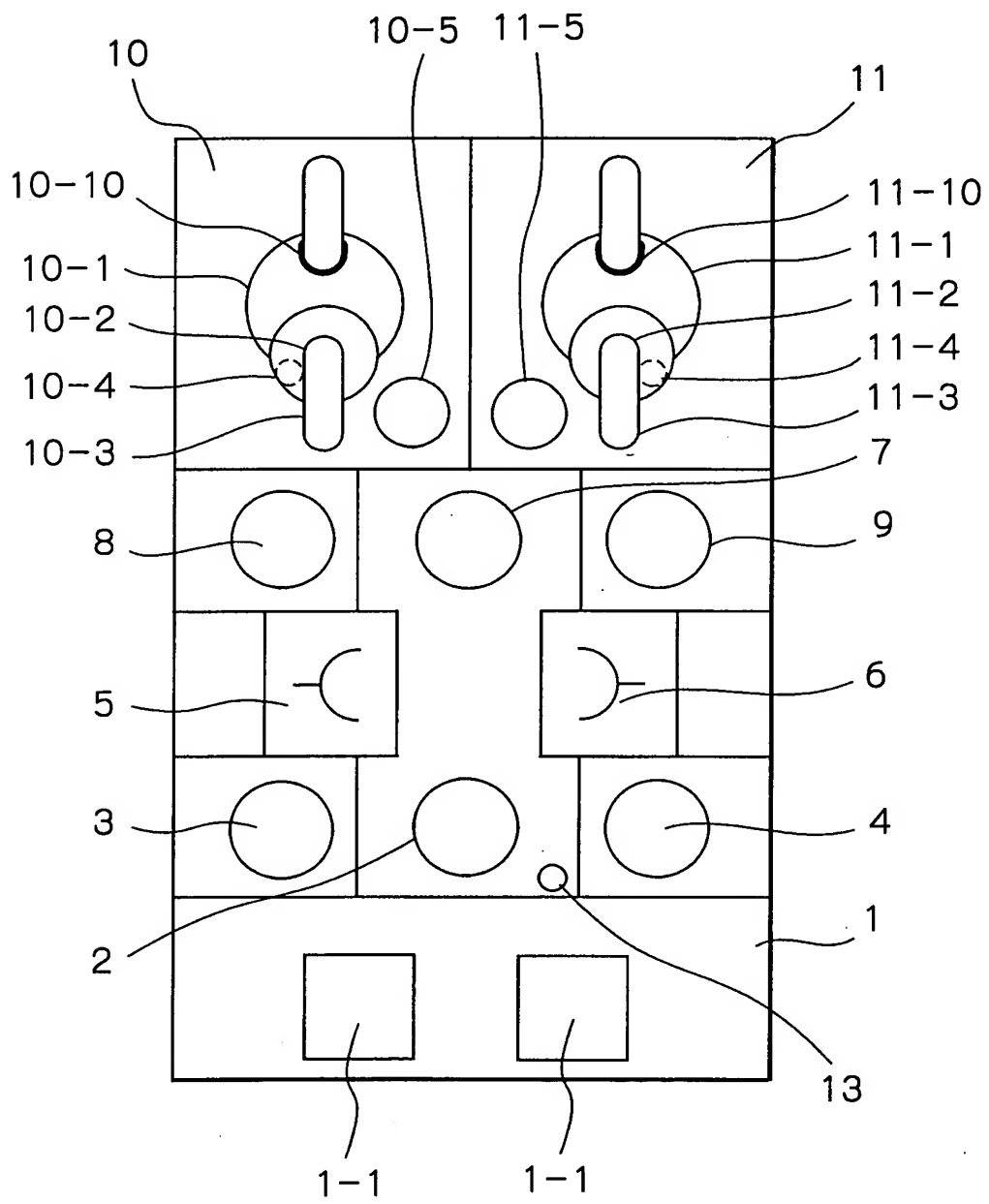


Fig. 1c

Fig. 2



The diagram illustrates a laser processing apparatus 10. A laser source 20 emits a beam that passes through a beam splitter 10-1 and is reflected by a mirror 10-2. The beam then passes through a lens 10-4 and is focused onto a workpiece W. The workpiece W is mounted on a stage 10-9, which is moved by a motor M2. The stage 10-9 is also moved by a motor M1. The apparatus includes various optical components such as mirrors 10-3, 10-5, 10-6, 10-7, 10-8, and 10-12, and a prism 10-1a. Arrows indicate the path of the laser beam and the movement of components.

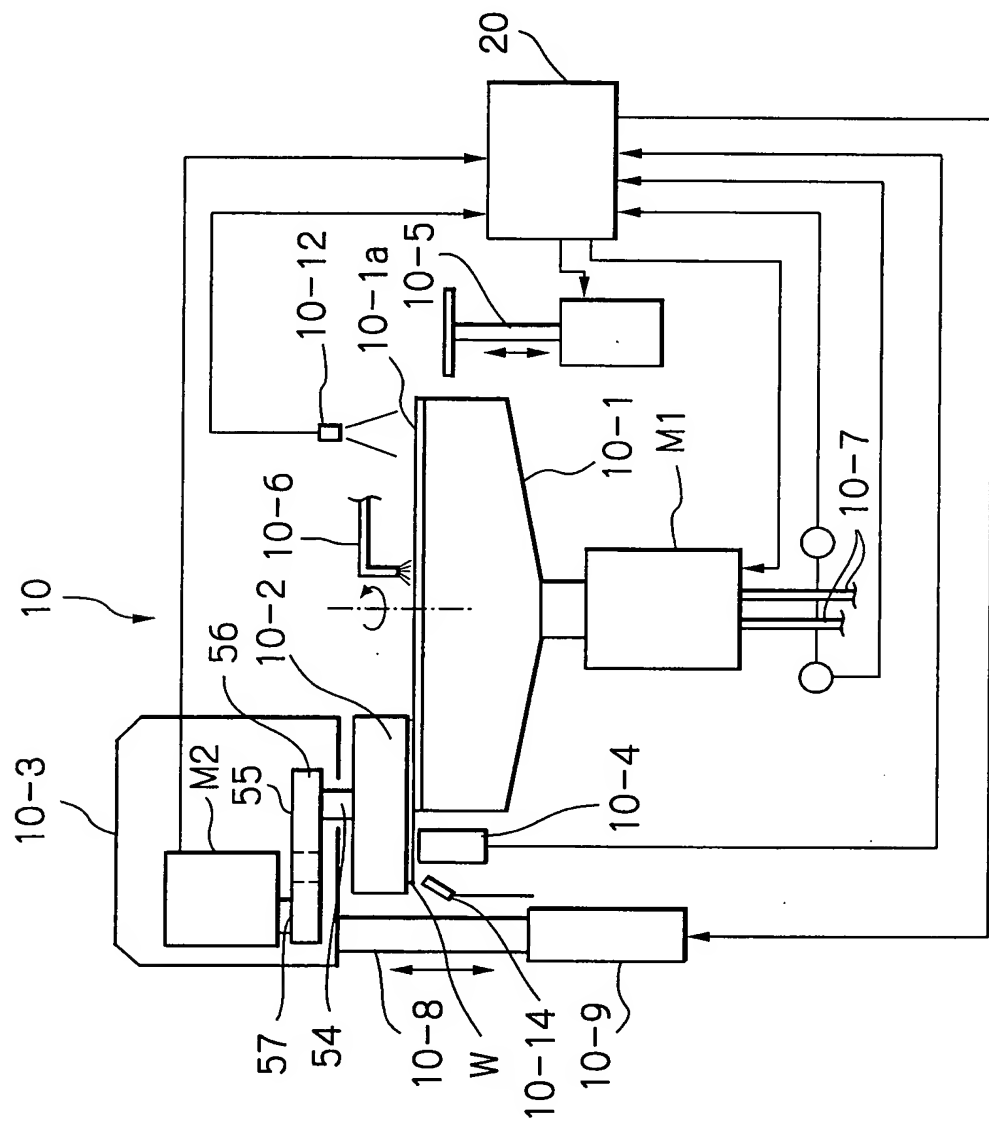


Fig. 4

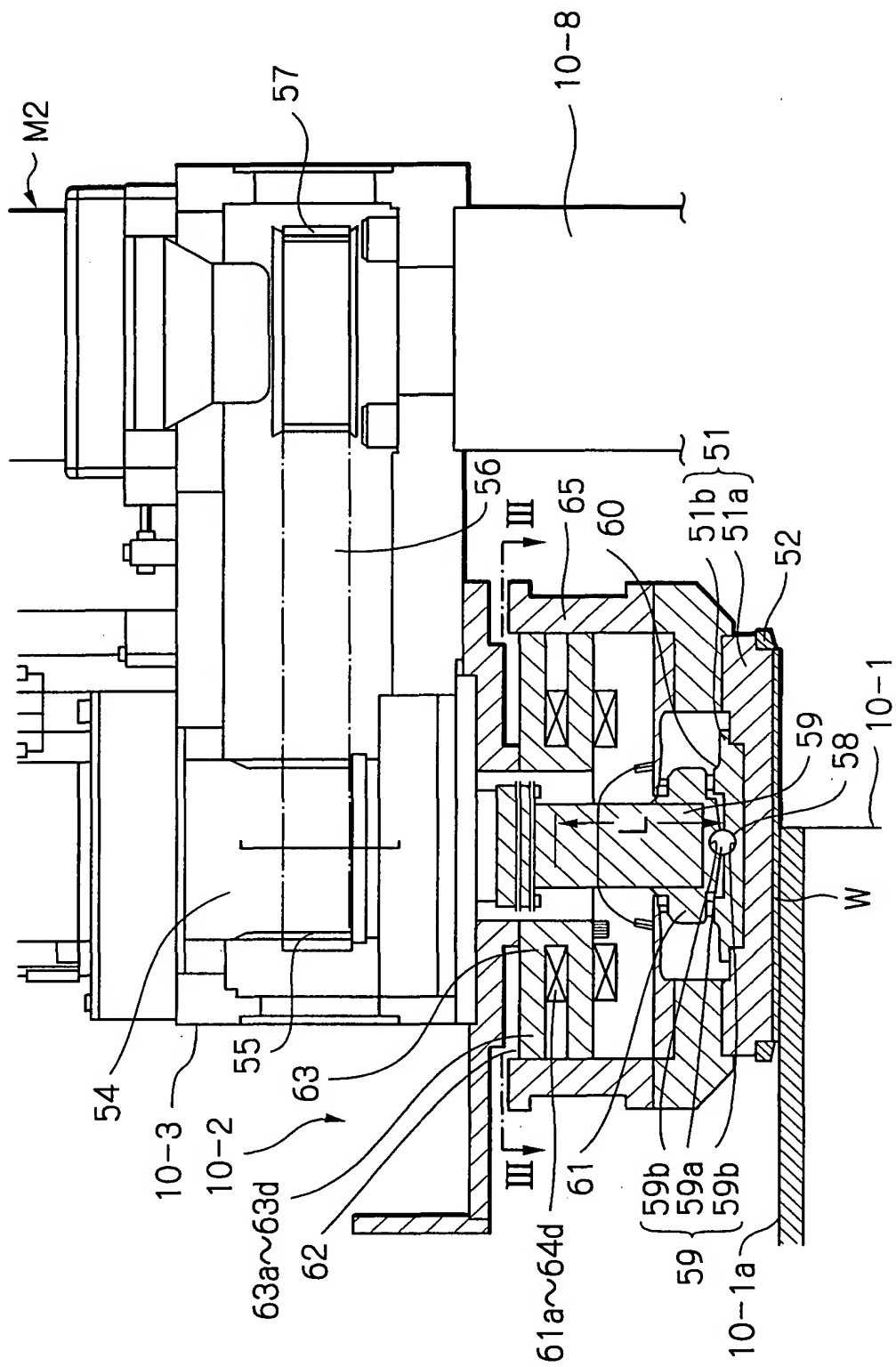


Fig. 5

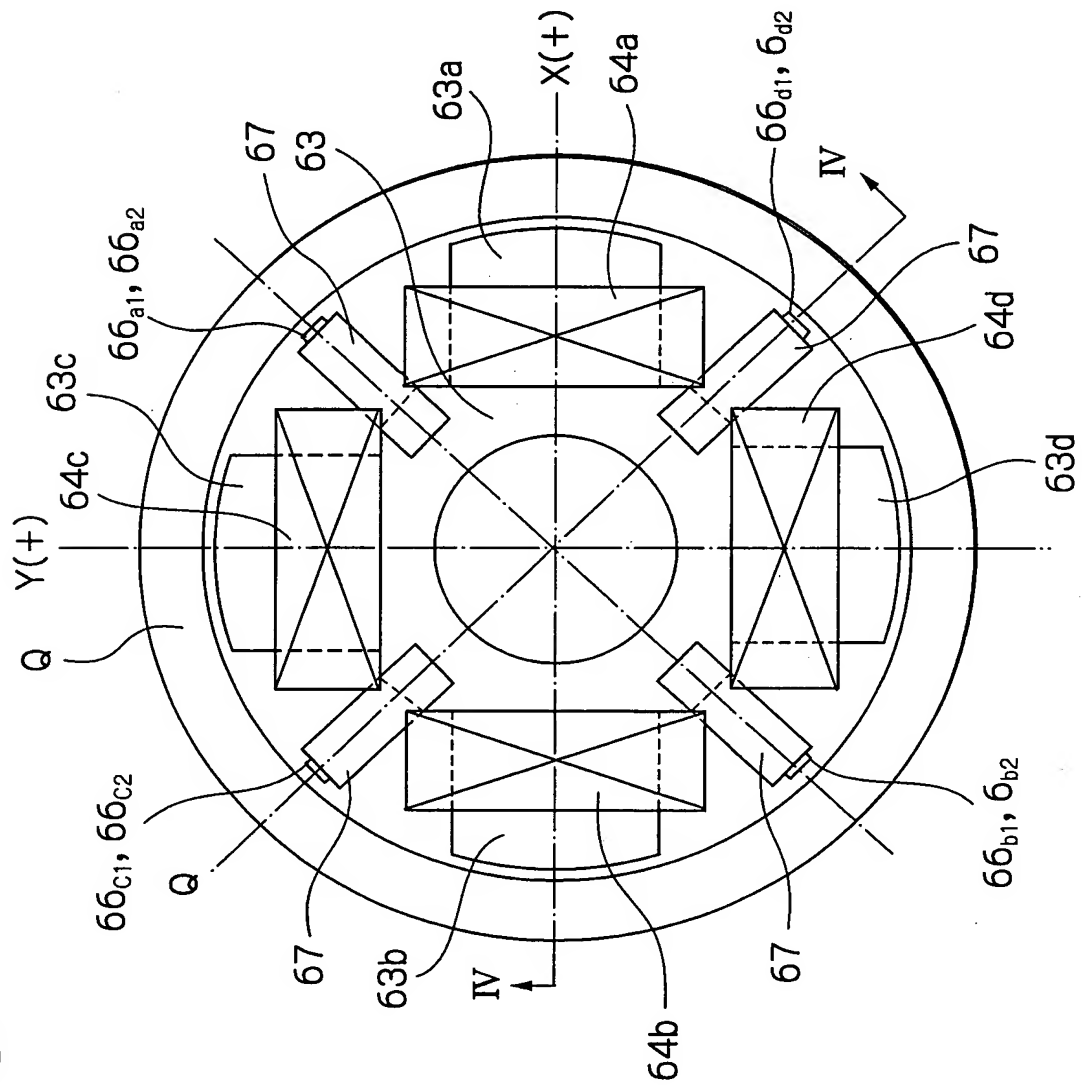


Fig. 6

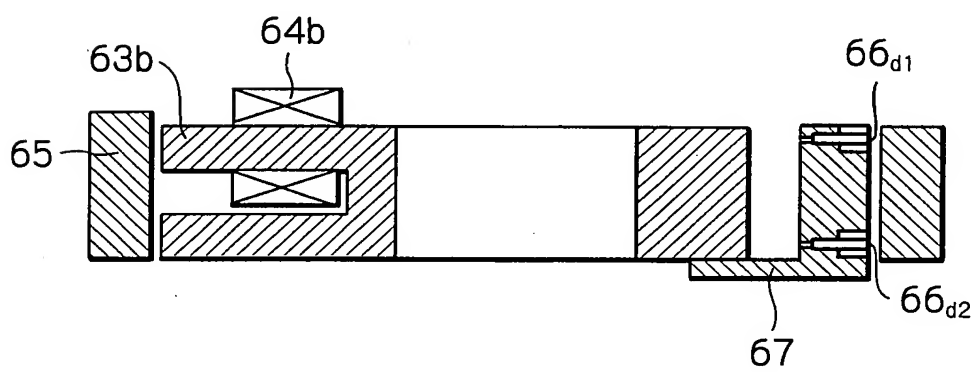


Fig. 7

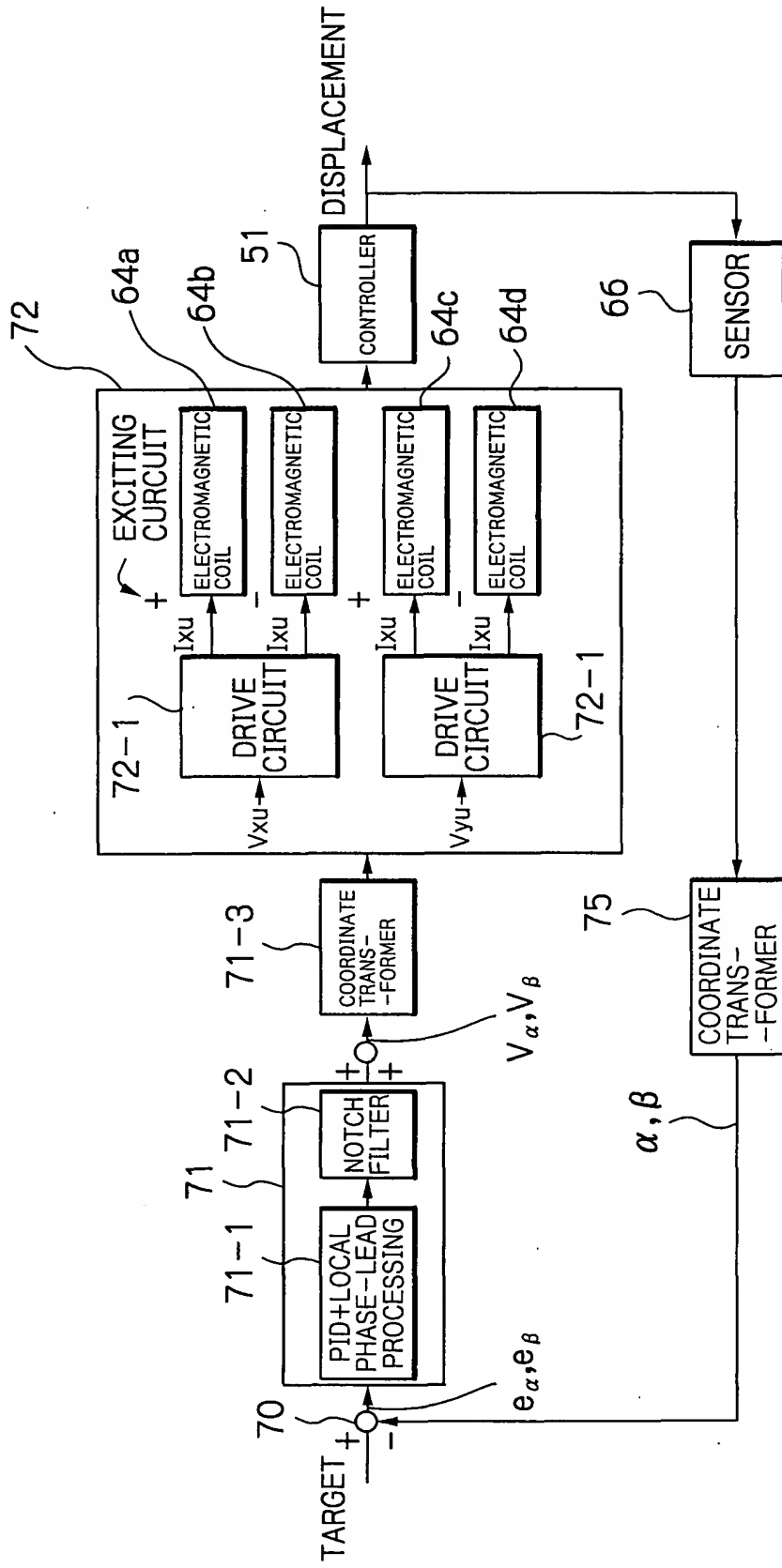


Fig. 8

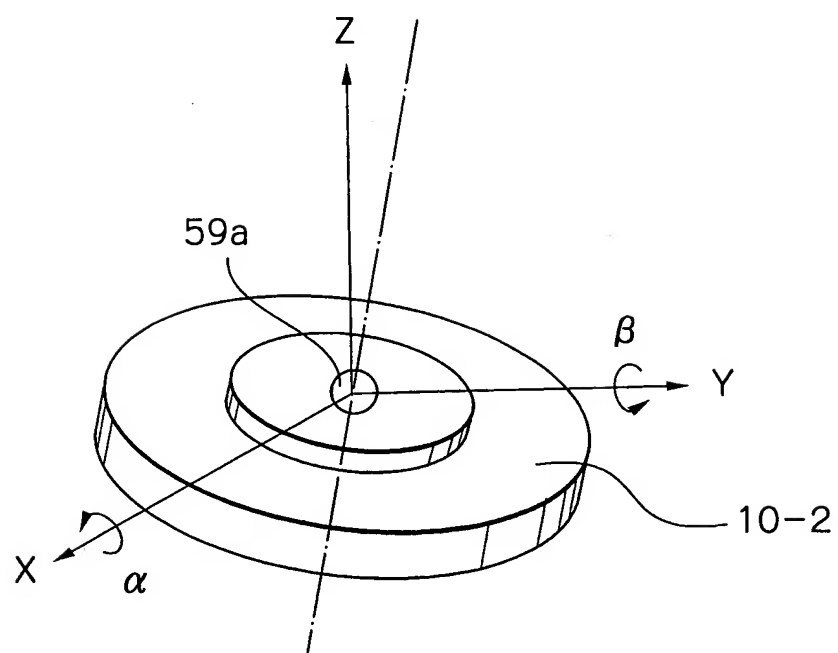


Fig. 9

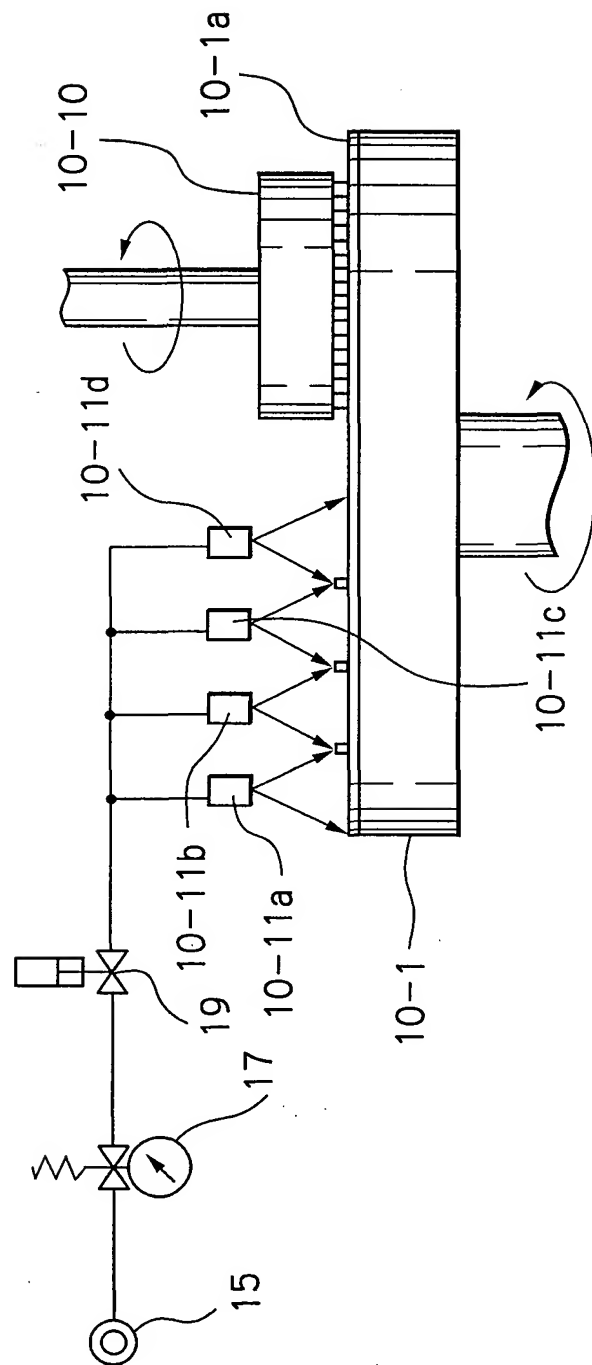


Fig. 10

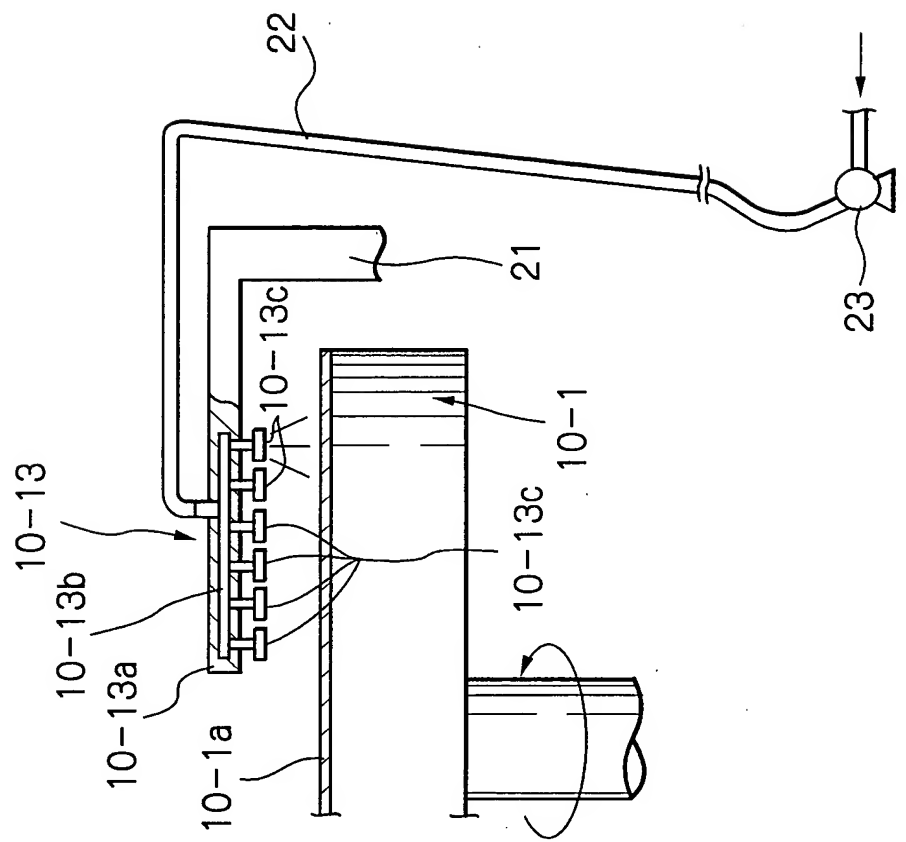


Fig. 11

	SLURRY	SUBSTRATE URGING FORCE	NUMBER OF REVOLUTIONS
FIRST POLISHING STEP ↓	SILICA BASE SLURRY FOR COPPER POLISHING	400 g/cm ²	70 rpm
SECOND POLISHING STEP ↓ END POINT ↓	SILICA BASE SLURRY FOR COPPER POLISHING	200 g/cm ²	70 rpm
POLISHING SURFACE CLEANING ↓ THIRD POLISHING STEP	SILICA BASE SLURRY FOR Ta POLISHING	200 g/cm ²	50 rpm

Fig. 12

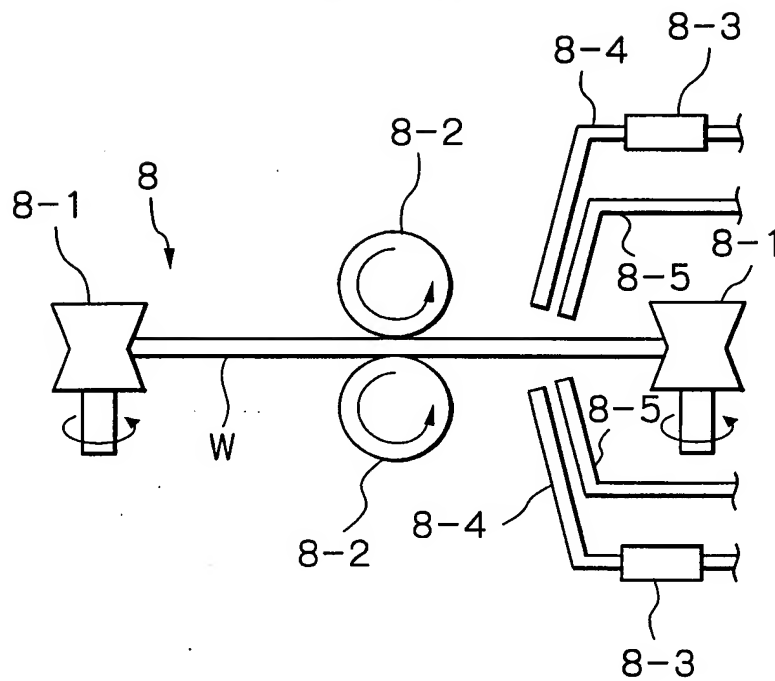


Fig. 13

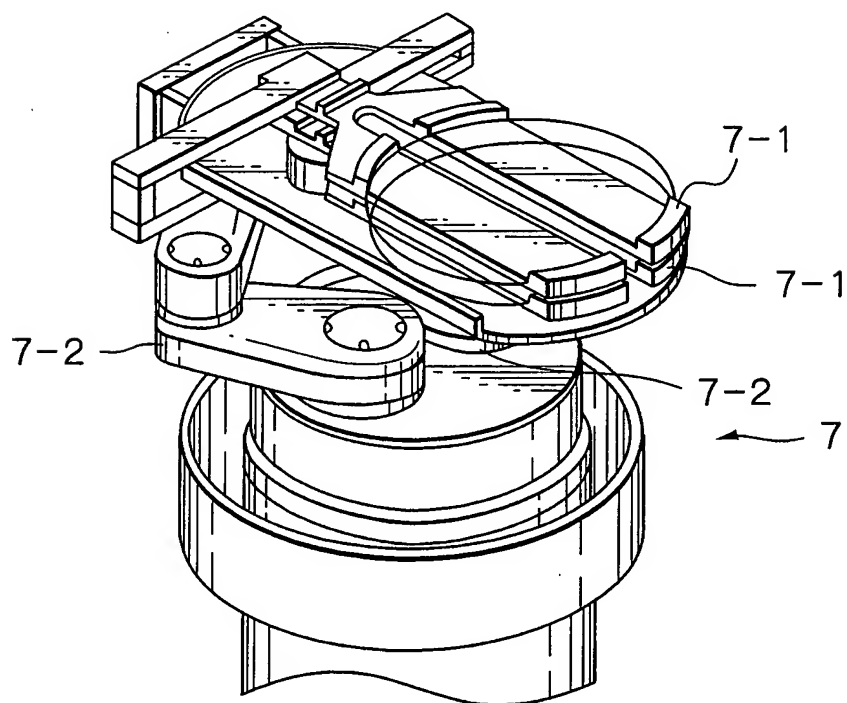


Fig. 14

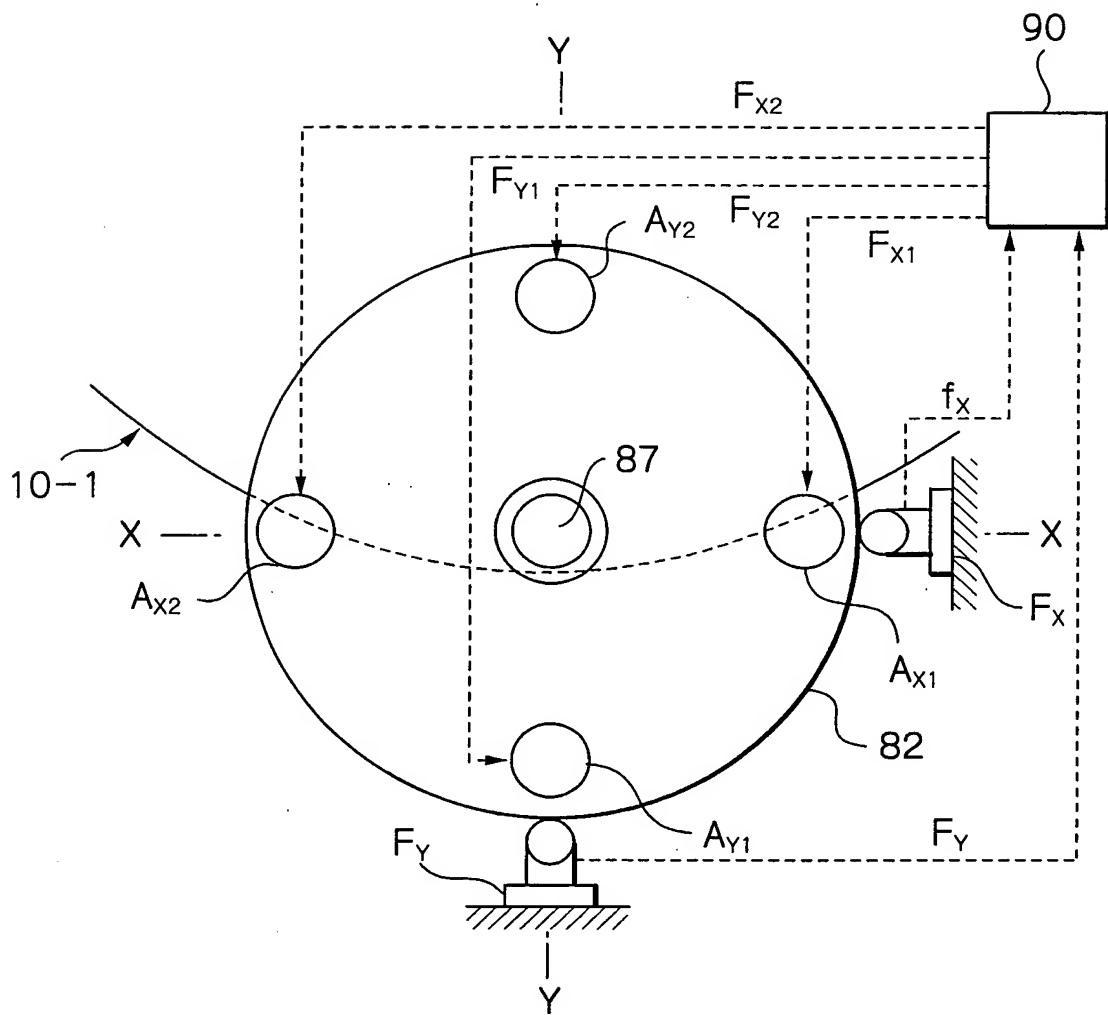


Fig. 16

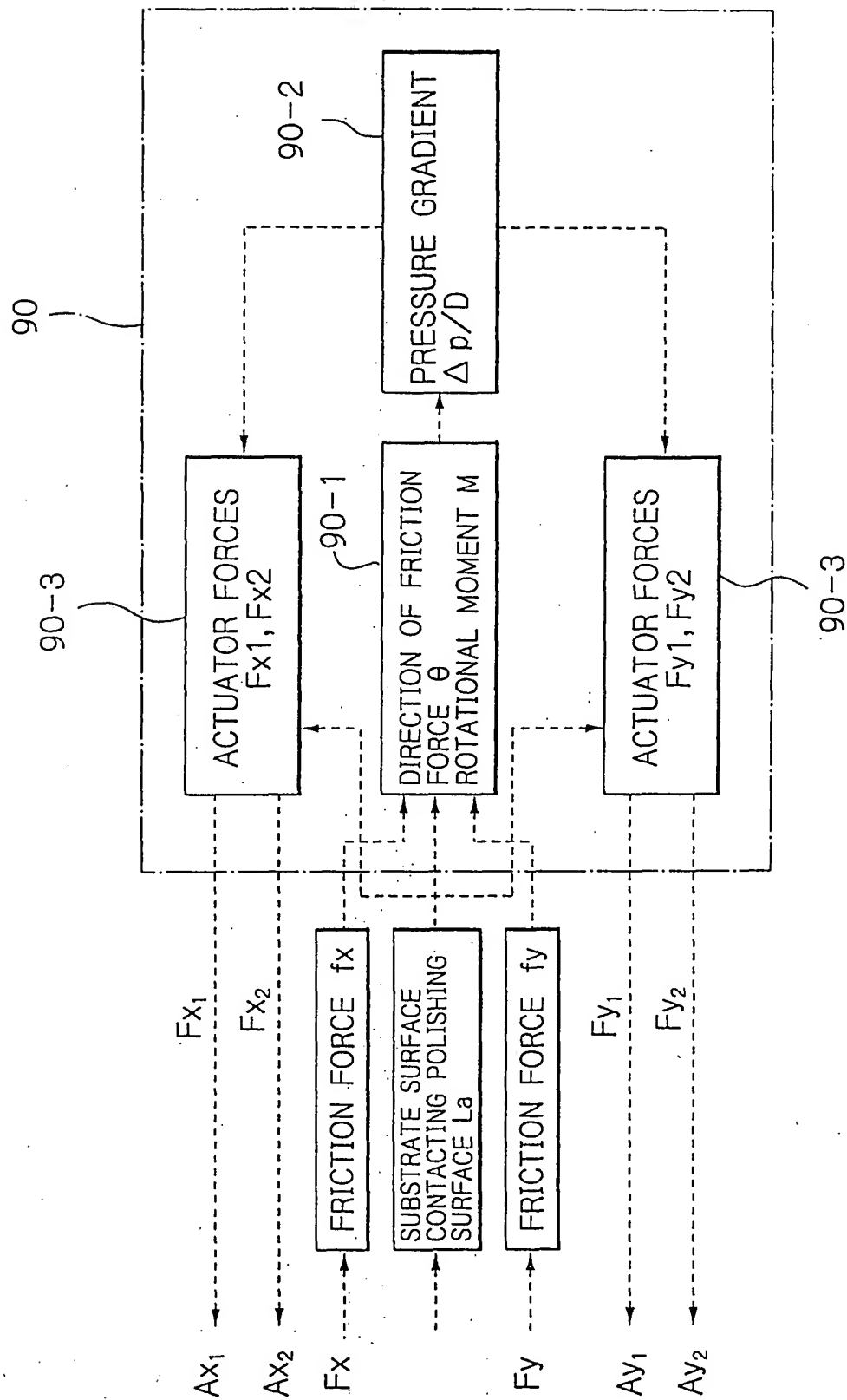


Fig. 17

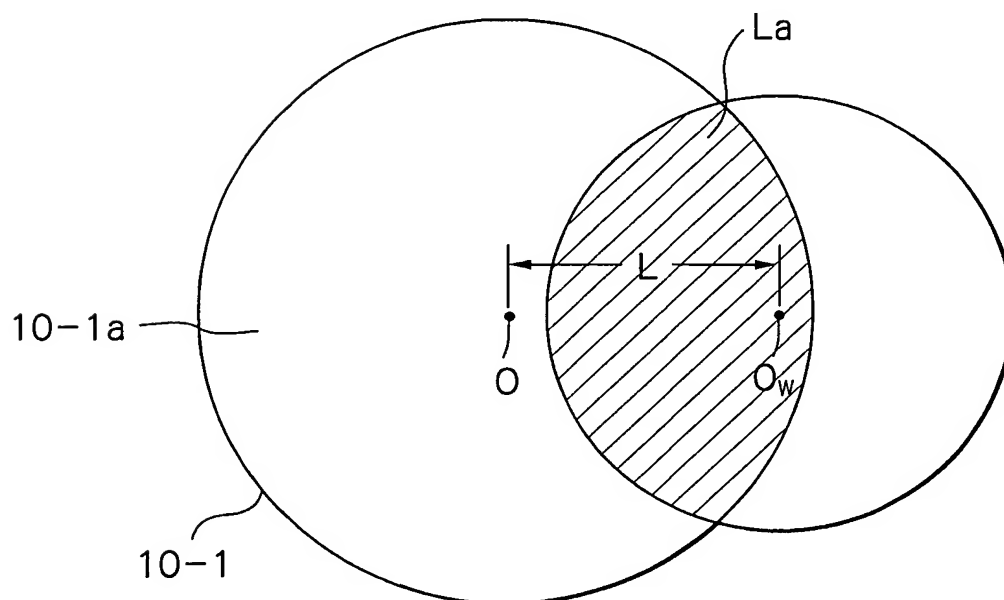


Fig. 18

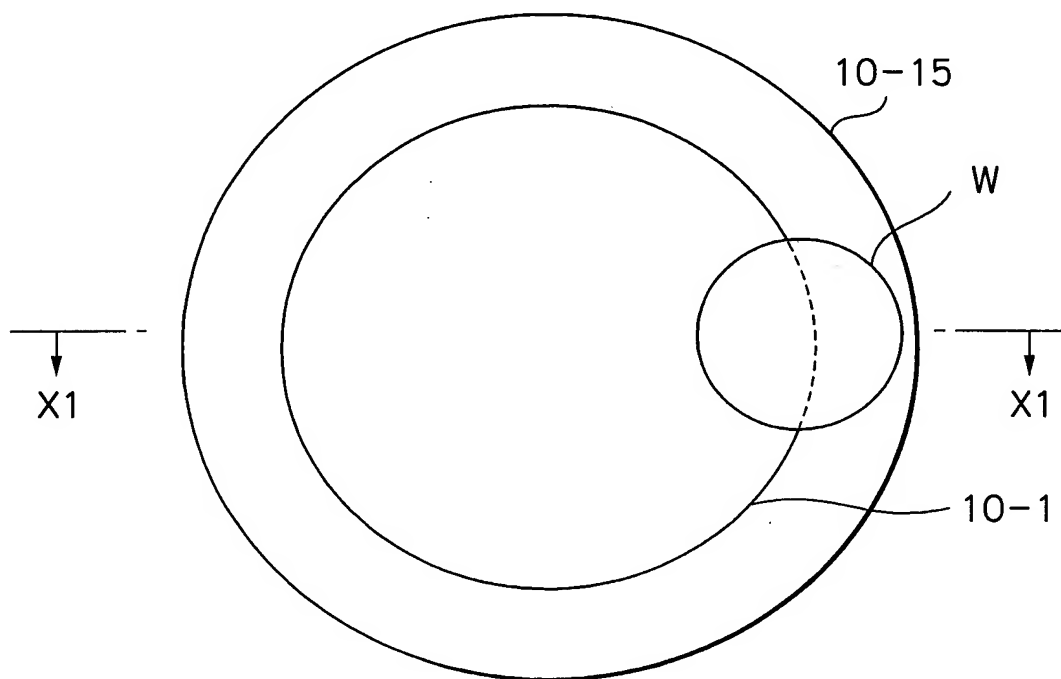


Fig. 19

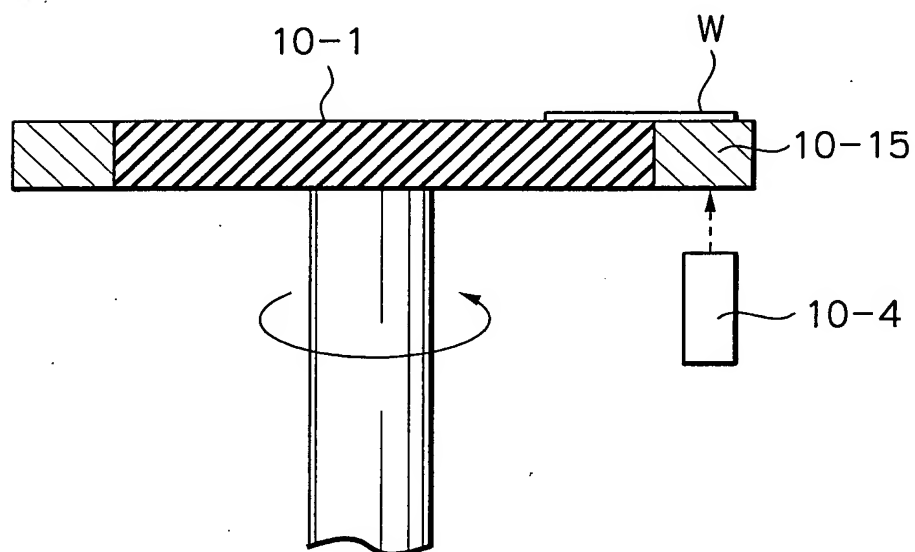


Fig. 20

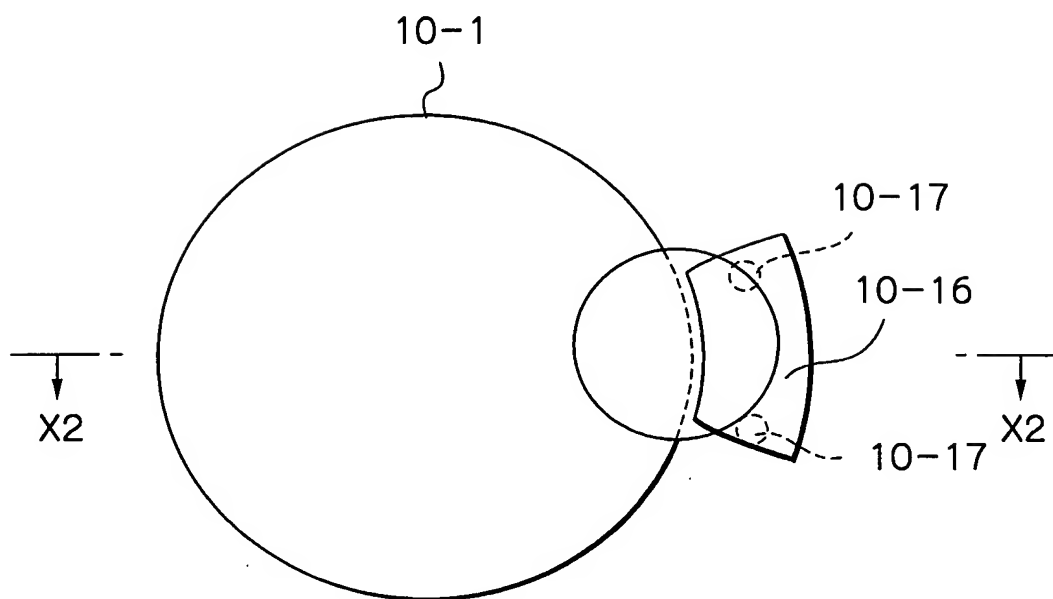


Fig. 21

